

ADMINISTRATIVE-INTERNAL USE ONLY

DATA CENTER OPERATIONS BRANCH

**NDS OPERATIONS PROCEDURE MANUAL
NO. P-I003**

**APPLICATIONS SOFTWARE
13 April 1983**

INDRAZIM PROGRAM

SYMBOLIC TITLE: INDRAZIM

PROGRAMMER:

STAT

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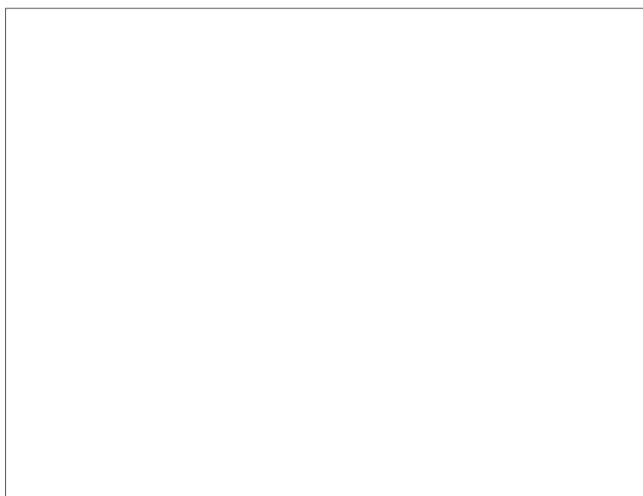
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Program INDRAZIM

Date 3 December 1981

APPROVALS

This operations manual has been reviewed and approved by the following persons:



STAT

15 Dec 81
(date)

21 Dec 81
(date)

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ADMINISTRATIVE INFORMATION

1. SUMMARY

Given a pair of points (point 1 and point 2) and given the geodetic latitude and longitude of both points, INDRAZIM computes and prints:

- a. The forward and back AZIMUTHS between the 2 points.
- b. The distance between the 2 points.

The program can make computations on more than one pair of points.

2. INPUT

The following items must be input to INDRAZIM for each pair of points.

- a. Ellipsoid - Eight Ellipsoids are available. You will input the Mnemonic for the Ellipsoid you have chosen. The Ellipsoid must be specified for each pair of points. The Ellipsoids are listed below:

WGS-72
WGS-66
WGS-60
KVY
Bessel
Clarke
International
AMS

- b. Latitude and Longitude of point 1. You must input degrees and direction; you may also input minutes and seconds. Decimal portions of degrees, minutes and seconds may be input if known.
- c. Latitude and Longitude of point 2. You must input degrees and direction. You may also input minutes and seconds. Decimal portions of degrees, minutes and seconds may be input if known.

3. DATA CARDS

You will need five data cards for each pair of points. One data card will indicate the Ellipsoid. The remaining four cards will show the latitude of point 1, the longitude of point 1, latitude of point 2 and longitude of point 2. Instructions for punching the data cards required are given on the next page.

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5. THE OUTPUT

INDRAZIM outputs a printer listing. An example is shown below.

```

1:@ASC,A XOT*W*ABS.
2:READY
3:@COPY,A XOT*W*ABS,INDRAZM,TF*.
4:FURPUR 28R1 E35 S74T11 11/27/81 13:46:59
5: 1 ABS
6:@FREE,R XOT*W*ABS.
7:READY
8:@XOT INDRAZM
9:ELLIPSOID WGS-72
10:LATITUDE1 X 20.00 0.0 0.0
11:LONGITUDE1 X 040.00 0.0 0.0
12:LATITUDE2 X 26.00 0.0 0.0
13:LONGITUDE2 X 040.00 0.0 0.0
14:00664468.13281 METERS
15:02180008.93750 FEET
16:00000358.78335 NAUT MILES
17:00000412.88048 STAT MILES
18:P1-P2 000.00000000
19:000.000 00.00M 00.0000S
20:P2-P1 000.00000000
21:000.000 00.00M 00.0000S
22:
23:
24:ELLIPSOID WGS-72
25:LATITUDE1 X 20.00 0.0 0.0
26:LONGITUDE1 X 040.00 0.0 0.0
27:LATITUDE2 X 20.00 0.0 0.0
28:LONGITUDE2 X 045.00 0.0 0.0
29:00523215.78125 METERS
30:01716583.57812 FEET
31:00000282.51334 NAUT MILES
32:00000325.11052 STAT MILES
33:P1-P2 089.14446449
34:089.000 08.00M 40.0721S
35:P2-P1 285.09225536
36:285.000 04.00M 56.1192S
37:
38:
39:@BRKPT PRINT$

```